

ABSTRACT

Halftoning by error diffusion, enhanced so
as to reduce the presence of structural artifacts in
the halftoned output while avoiding an artificial
increase in halftoning image noise. Specifically,
error diffusion according to the invention divides
the input gray level intensity range into different
segments for purposes of both thresholding and error
diffusion. Different error diffusion threshold
masks are applied for each respective segment, and
different error diffusion weights are applied for
each respective segment, with a decision being made
as to whether or not to apply a different threshold
mask being based on the local image gradient.